

# Memorandum

To : Bob Reid  
Sacramento

Date : March 7, 1983

Subject: UIC Extensions

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DIVISION OF OIL & GAS  
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From : Department of Conservation—  
Division of Oil and Gas

Place: Bakersfield

As requested by the Environmental Protection Agency, the District 4 office has reviewed the list of nonexempt aquifers under UIC regulations and wishes to request extension of the termination deadline for two of these zones to 18 months. In preparation of this request, we have researched the domestic water well usage and, with the aid of various oil operators involved, have received additional current information on the injection projects in these zones. This extension will enable us to collect and correlate data for possible exemption application at a later date.

1. Chanac zone, Kern River field: At present, 4 wells are permitted to inject water into this zone at depths between 1100' -1700'± (drill depth measurements). The total volume of fluid injected daily is approximately 41,210 barrels. Two of the wells do inject small (<1%) percentages of water softener brine (high only in chlorides) but, with the dilution factor, the TDS of the injected fluid does not exceed that of the Chanac zone. The other two wells inject only produced Kern River zone water, which is of a significantly better quality than the Chanac zone. Domestic water well data obtained from the Kern County Water Agency shows no wells within one mile from these injectors. Within 72 square miles of these four injection wells, K.C.W.A. (KCWA) records show 122 domestic wells. Of these, 17 are known to have been used within the past year (the reason for use is unknown). Thirty-one of these wells are either abandoned or have been idle for at least 3 years. The status of the remaining 74 is unknown. Depth measurements are known on 24 of these wells. Only 2 of these 24 are deeper than 1100', both have been idle for more than 14 years, and the closest of these two is a least 3 miles south-southeast of the injectors. In addition, we have been supplied with current chemical analyses of water being injected, as well as a letter from the operators describing the physical and financial hardships they would face should injection approval be rescinded. Copies of this information are attached. Based on this information, we feel that this injection interval warrants exempt status under the UIC program.
2. Kern River zone, Kern Bluff field: At present, the Division of Oil and Gas is allowing only one well to inject produced oilfield water into the Kern River zone in this field. Approximately 4000 barrels per day are disposed under vacuum into barren sands from 200' -350' below ground level. From January 1983 water analyses (copies attached) the injection water tests better in TDS than drinking water used in the area and better in all respects than the health standards for domestic use water. KCWA records show only two domestic

water wells within a 12-square-mile area surrounding this well. The status of these wells is unknown. Depth measurements were available on only one of the two wells located within the same section as the disposal well. These measurements show that the water producing interval (if currently utilized) is 55' below the deepest injection interval. The other water well is located at least  $\frac{1}{2}$  mile east of the injector. Attached is a letter from the operator stating the difficulties he would encounter should we rescind injection approval plus representative laboratory analyses of the injected water and local drinking water. It should be noted that the present zone of injection is barren sands and gravels and that the logical alternative to continued subsurface injection would be surface disposal.

Again, we submit this evidence in support of continued injection into these zones and ask that exemption status be given.

If you have any questions, please contact this office.



David Mitchell  
Associate Oil and Gas Engineer

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Attachments